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Rothe

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(54) **CONTAINER ASSEMBLY, SUPPORT STRUCTURE AND METHODS**

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F25C 1/243 (2018.01)

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CPC ***F25D 25/005*** (2013.01); ***F25C 1/243*** (2013.01); *F25D 2331/801* (2013.01); *F25D 2331/809* (2013.01)

(58) **Field of Classification Search**
CPC F25D 25/005; F25D 2331/801; F25D 2331/809; F25C 1/243
See application file for complete search history.

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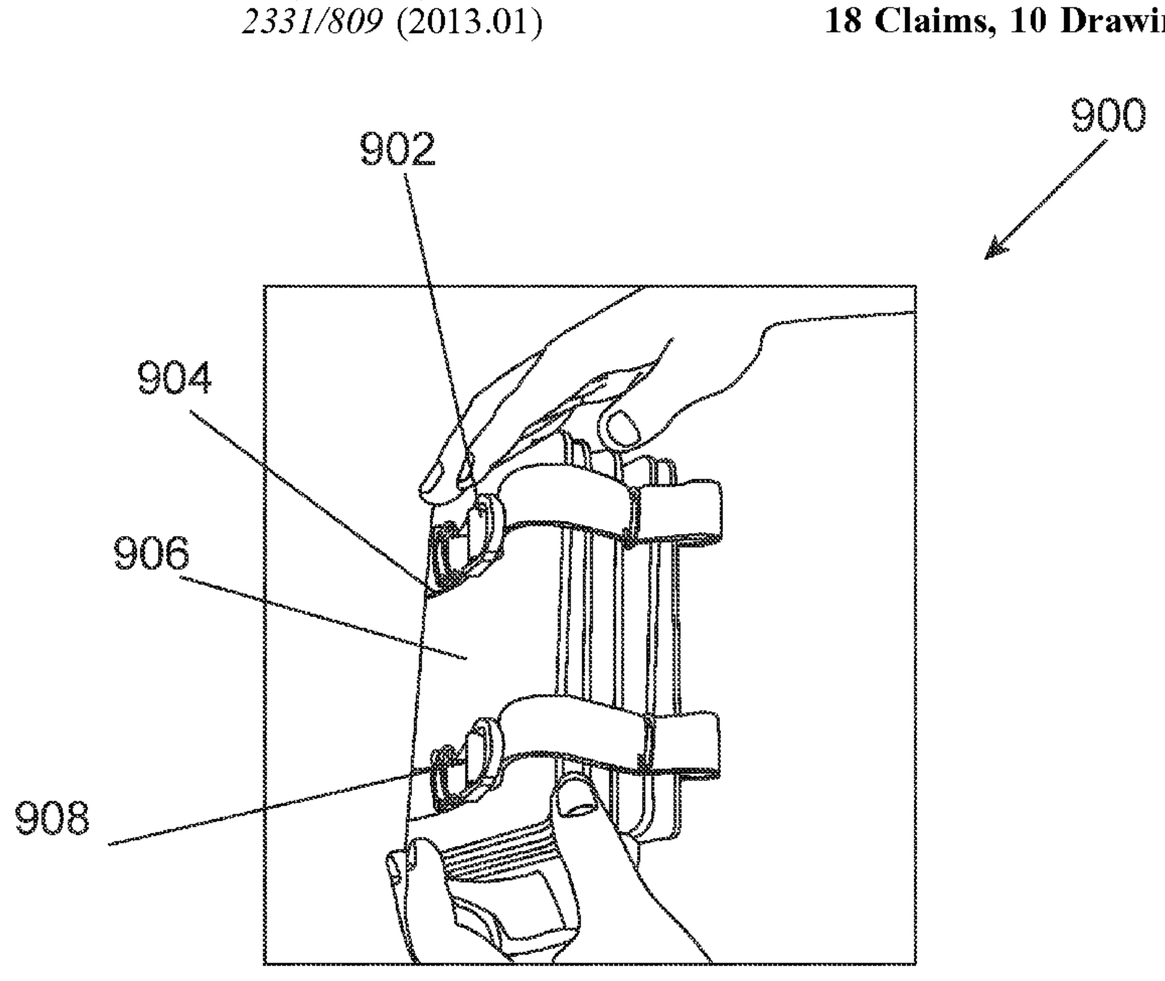
(57) **ABSTRACT**

A container assembly comprises a V-shaped container having a V-shaped cross-section and being formed from freezer-safe material, and a support base having a V-shaped groove sized to received and cooperate with the container thereby to support the container during filling with freezable liquid. Also disclosed is a freezer container support structure comprising two or more plates and at least two spaced support members. The support members are adapted to engage the plates in spaced locations along the support members, to maintain one or more freezer containers between the plates during freezing of a freezable liquid contained in each said freezer container.

18 Claims, 10 Drawing Sheets



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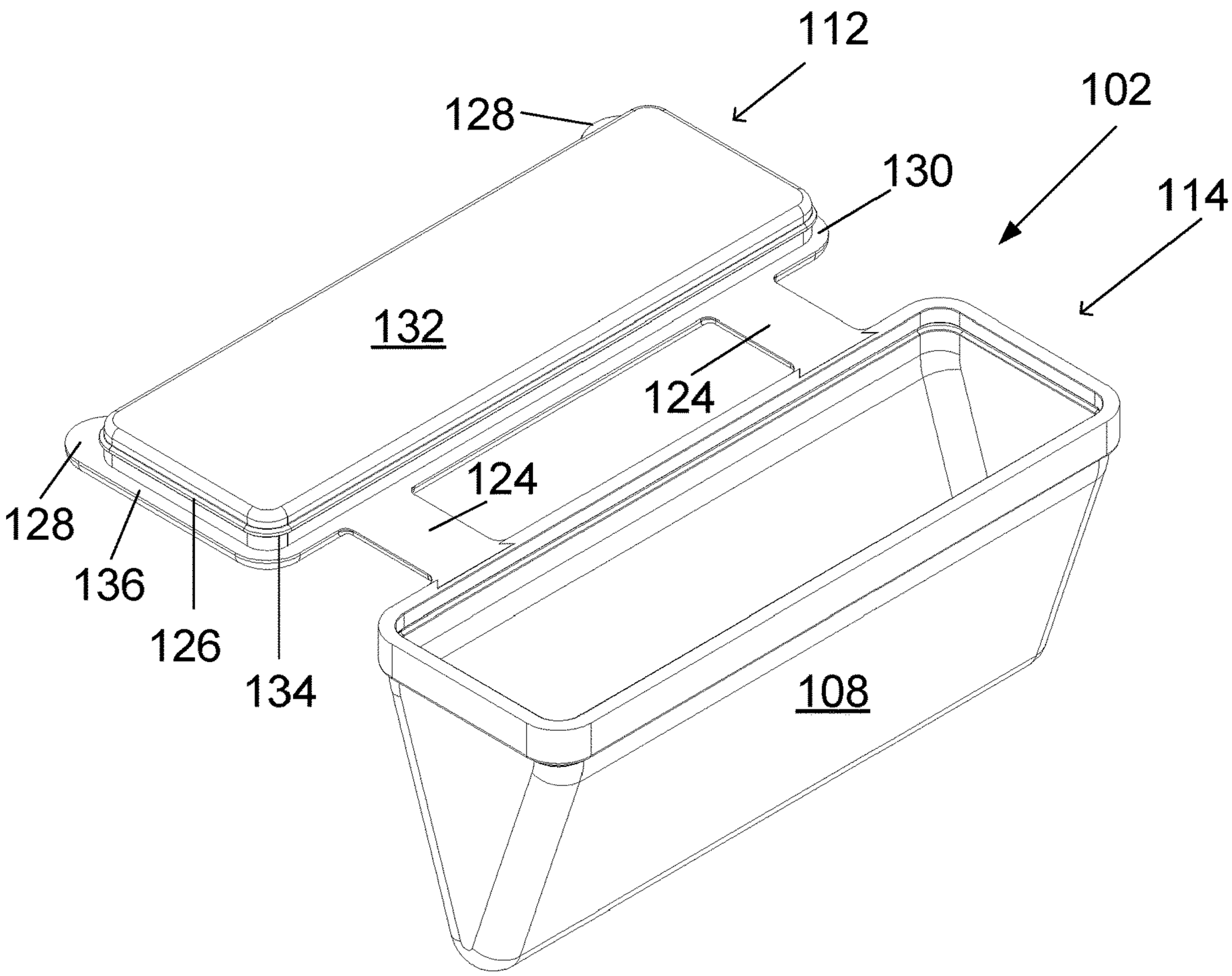

Figure 1a

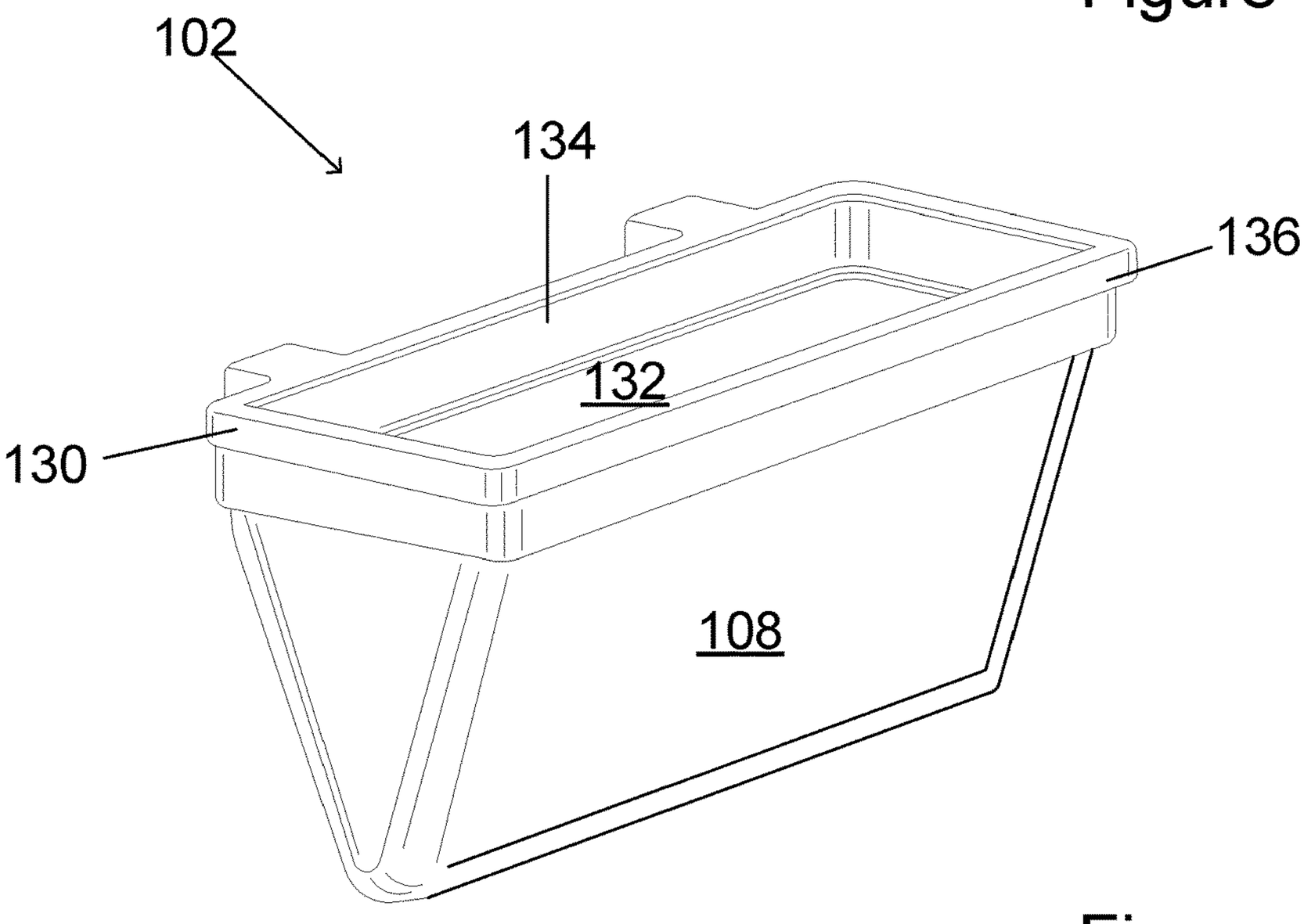

Figure 1b

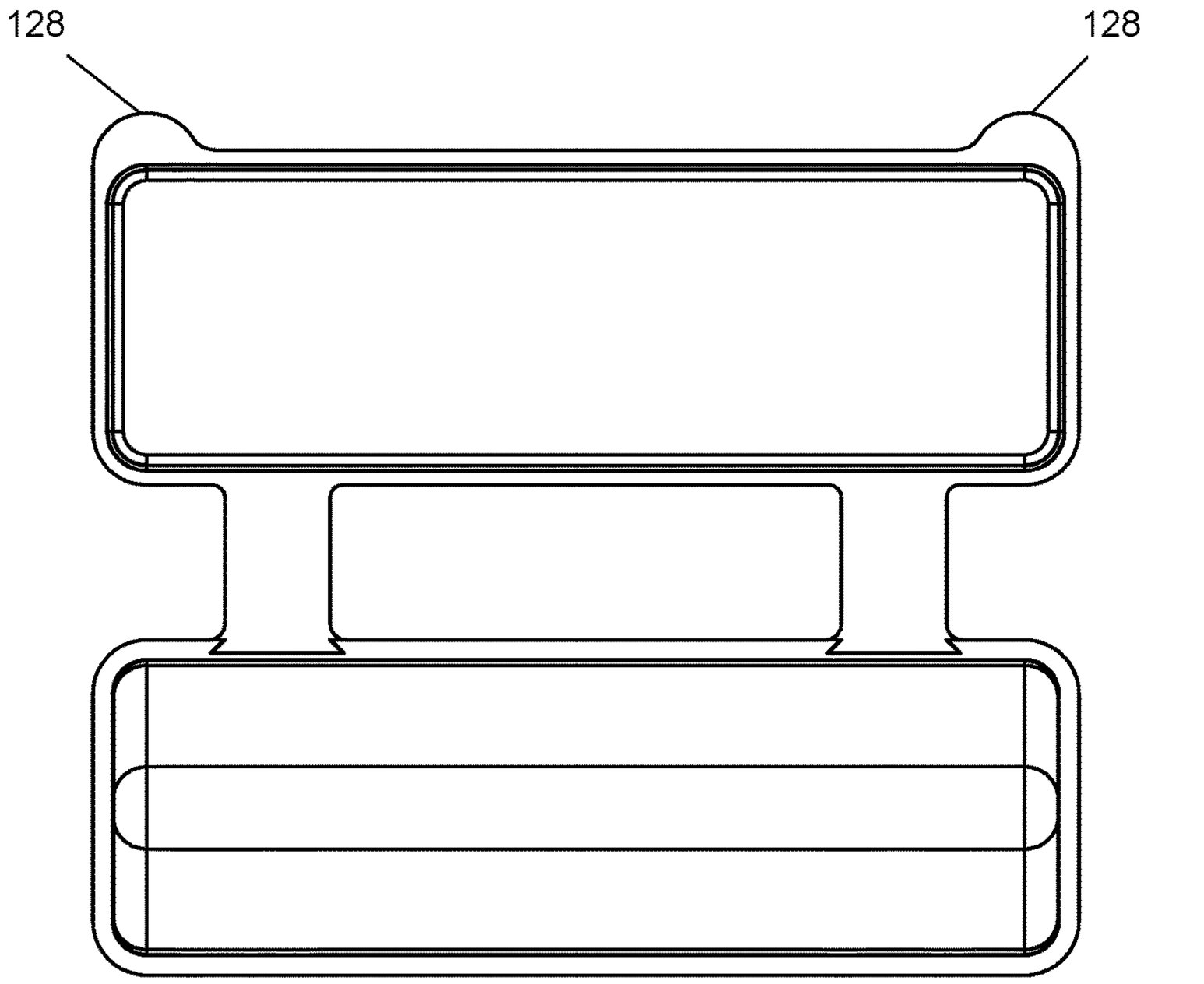

Figure 1c

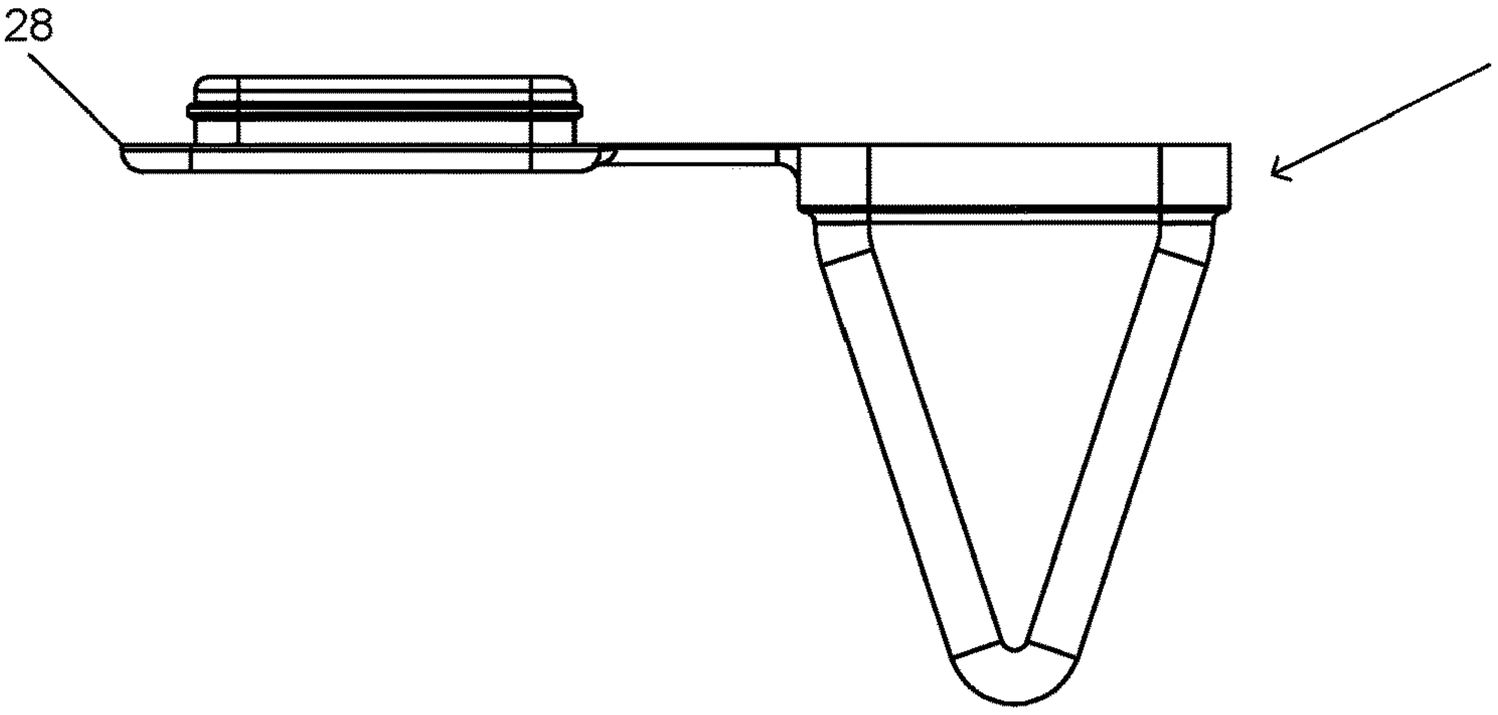

Figure 1d

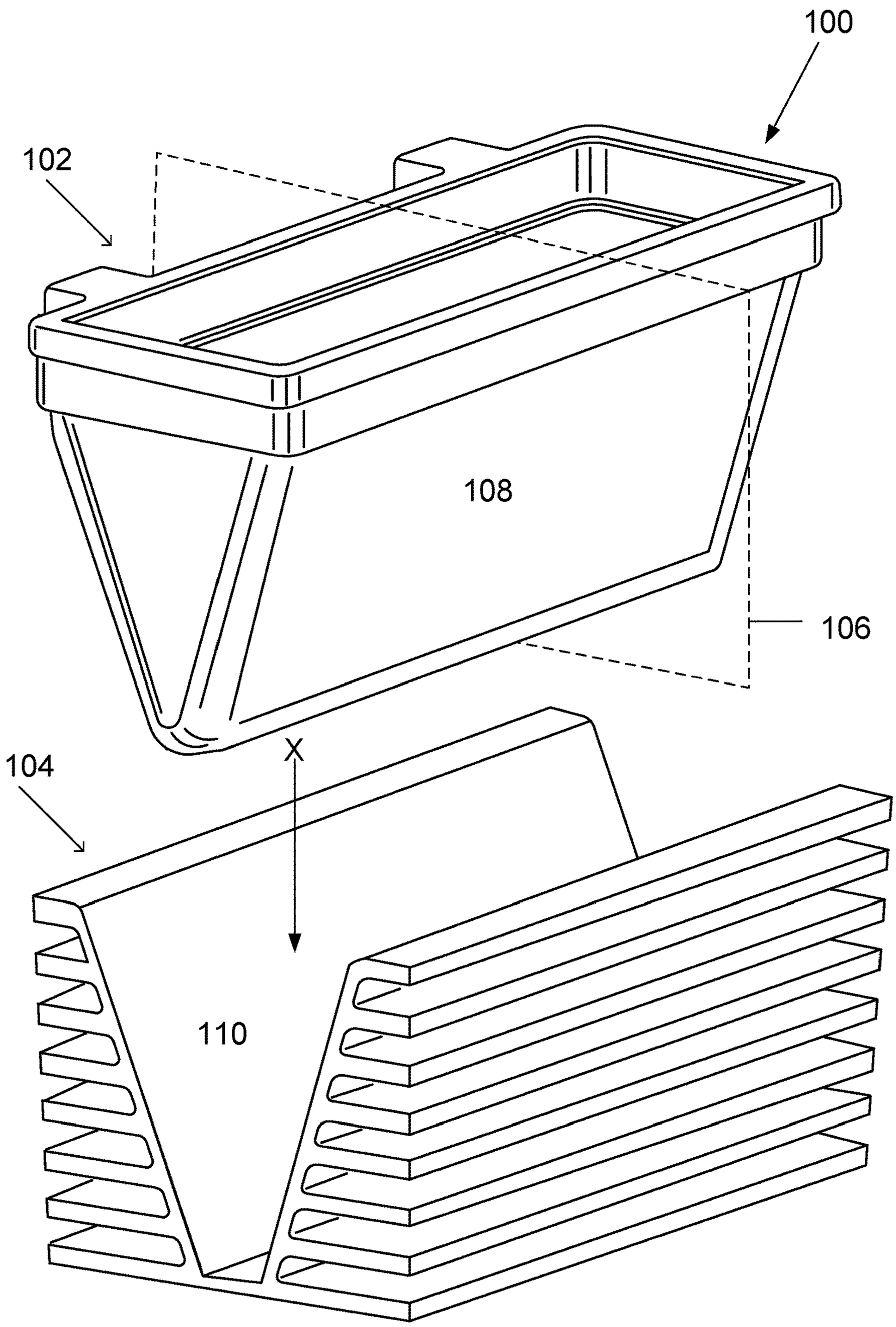

Figure 2

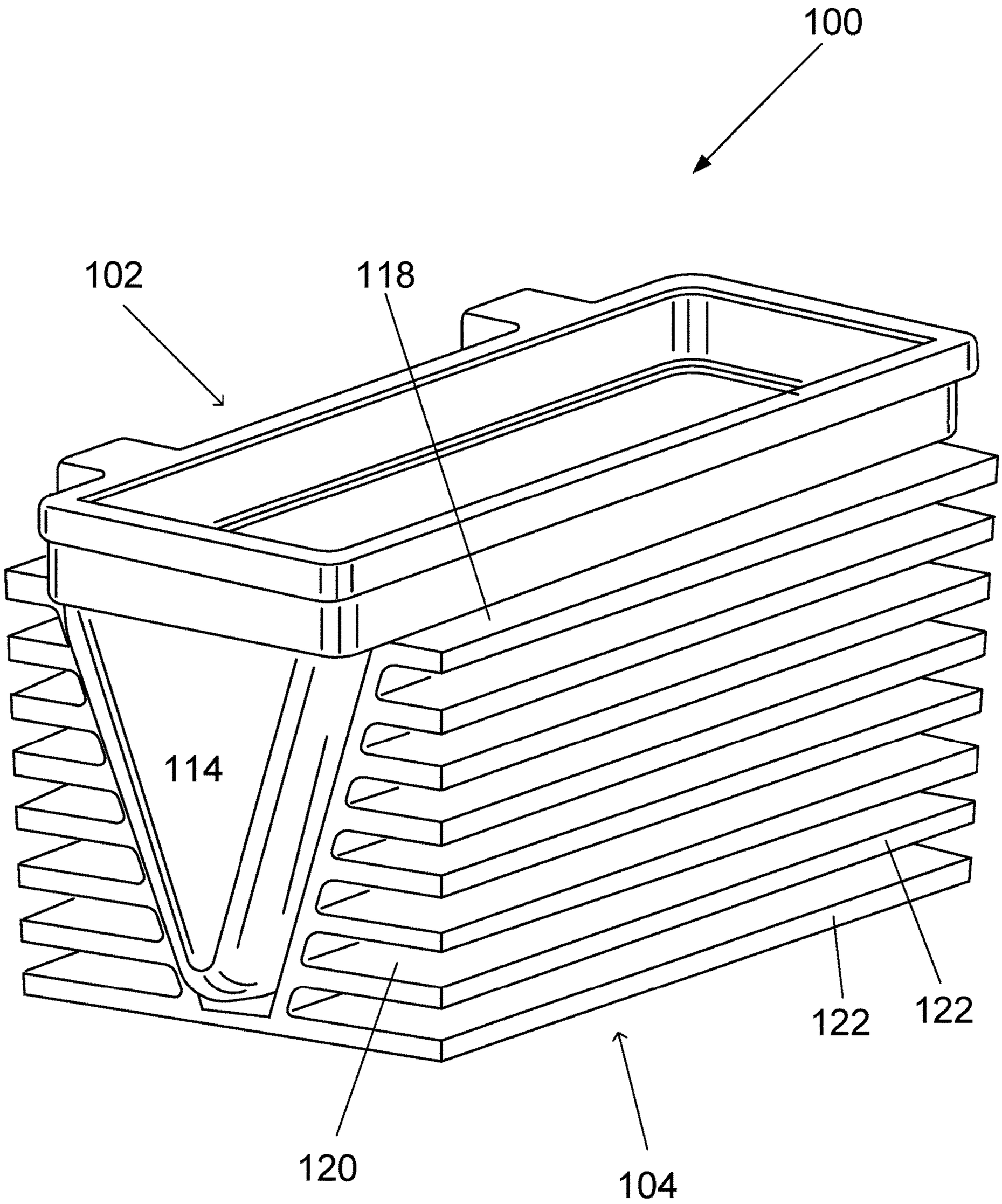

Figure 3

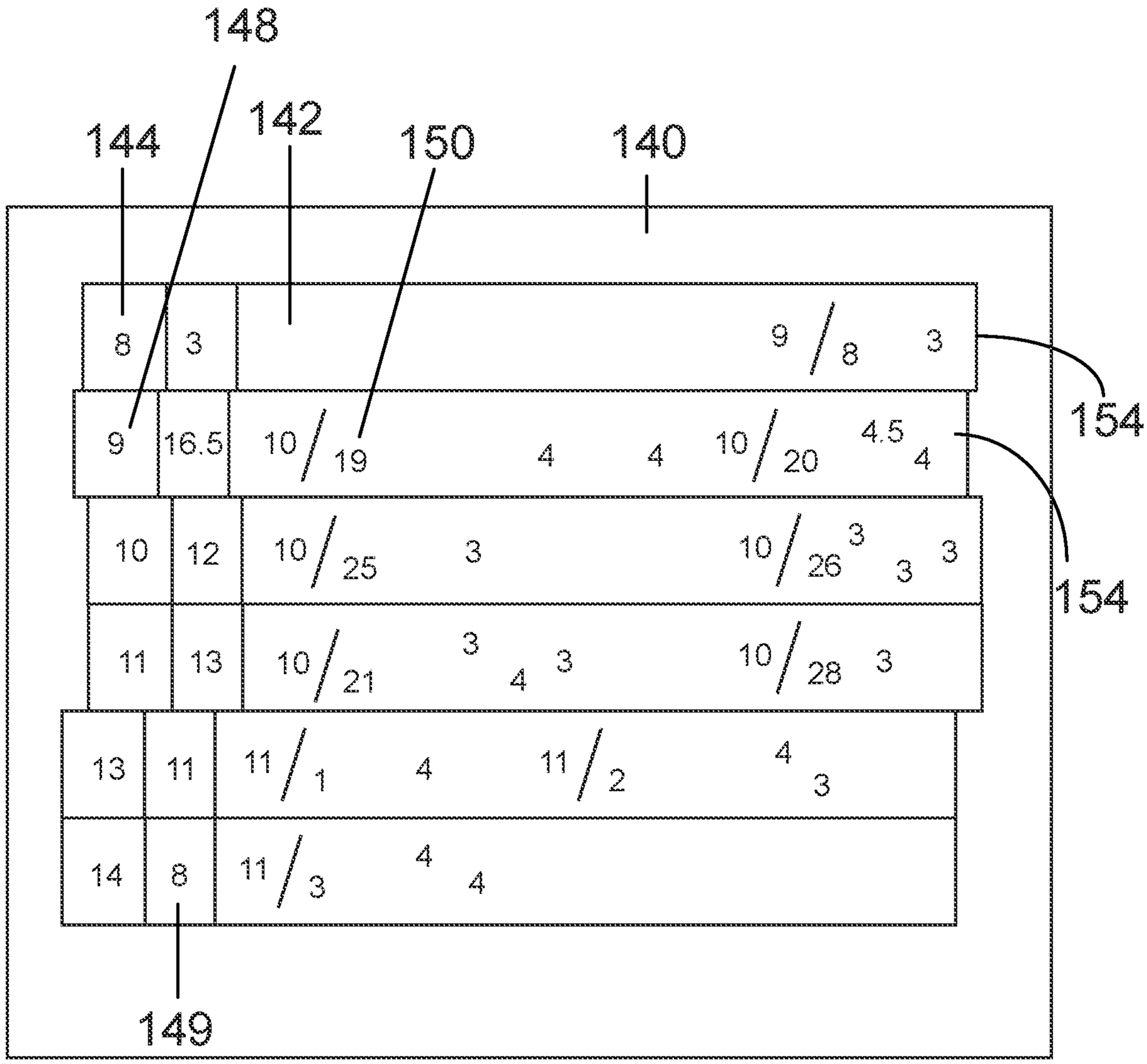
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Figure 4

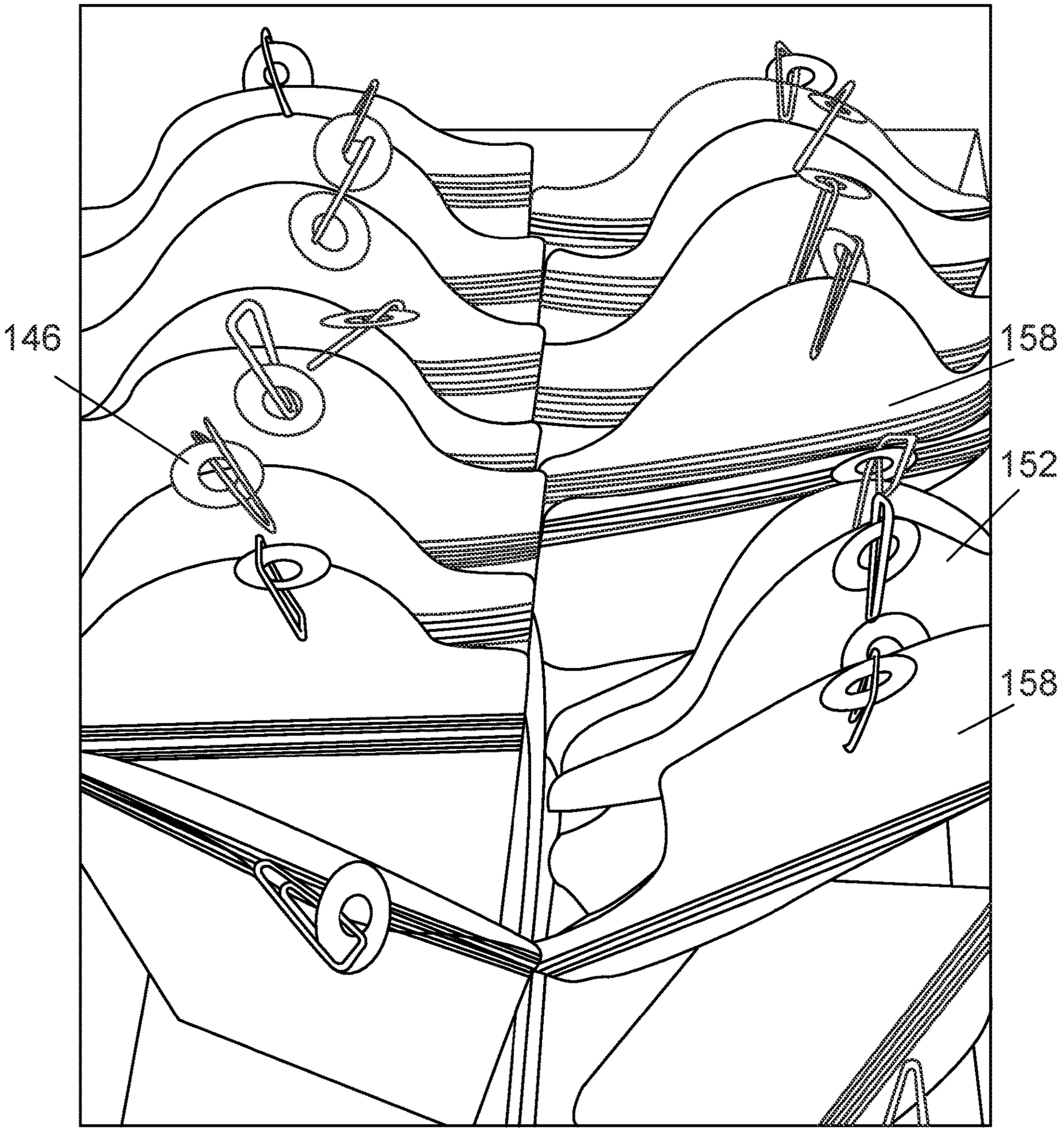

Figure 5

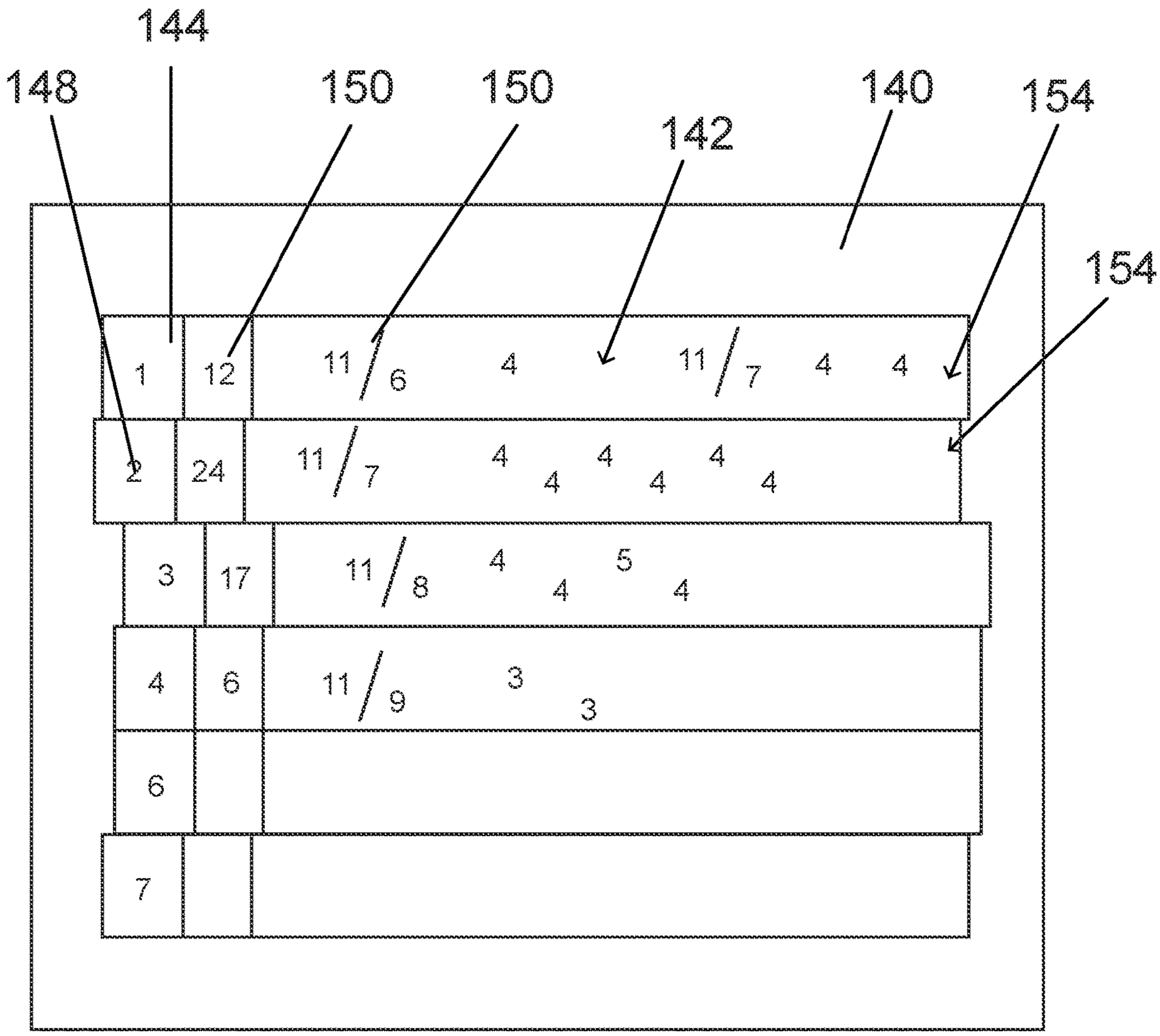
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Figure 6

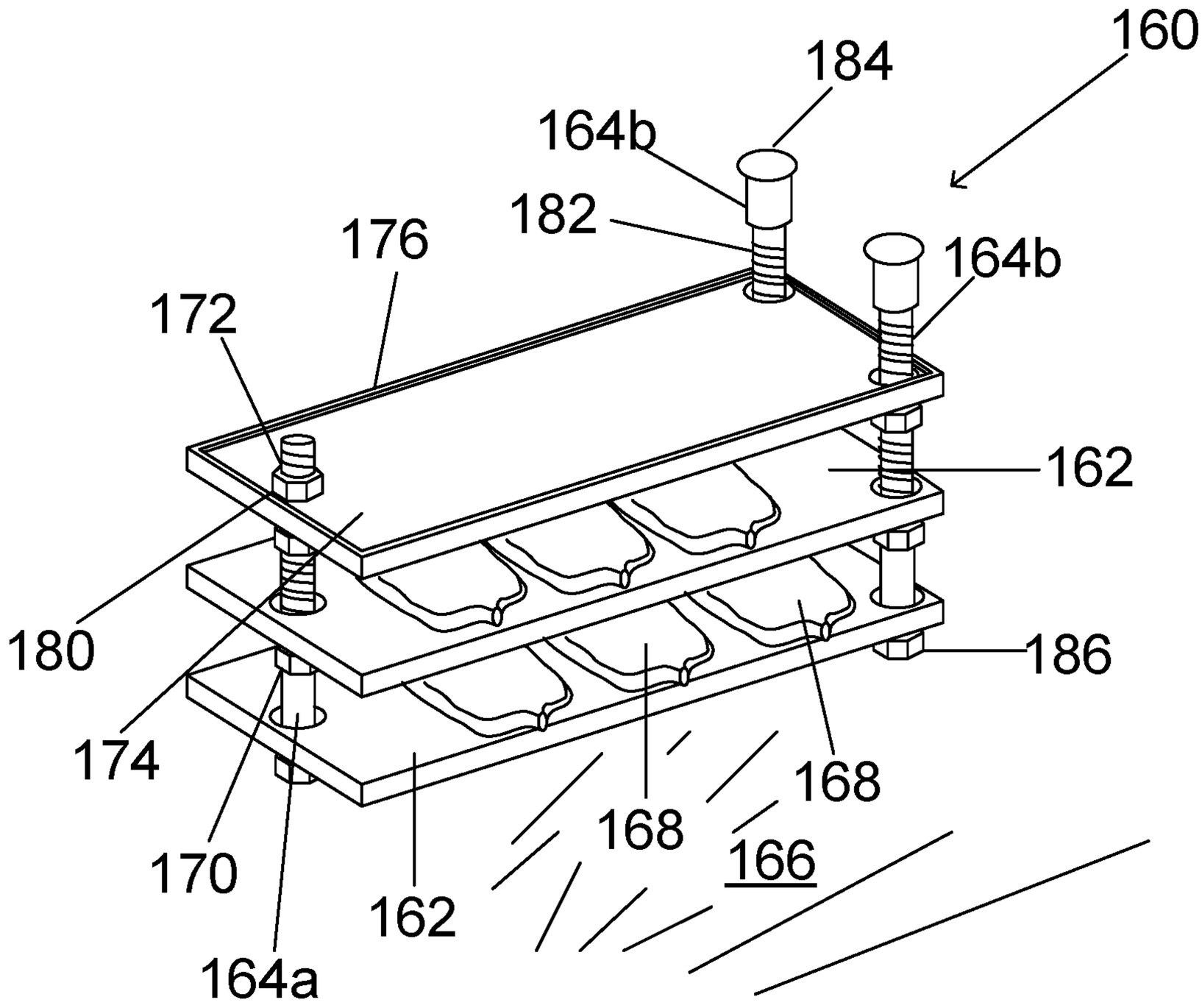
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Figure 7

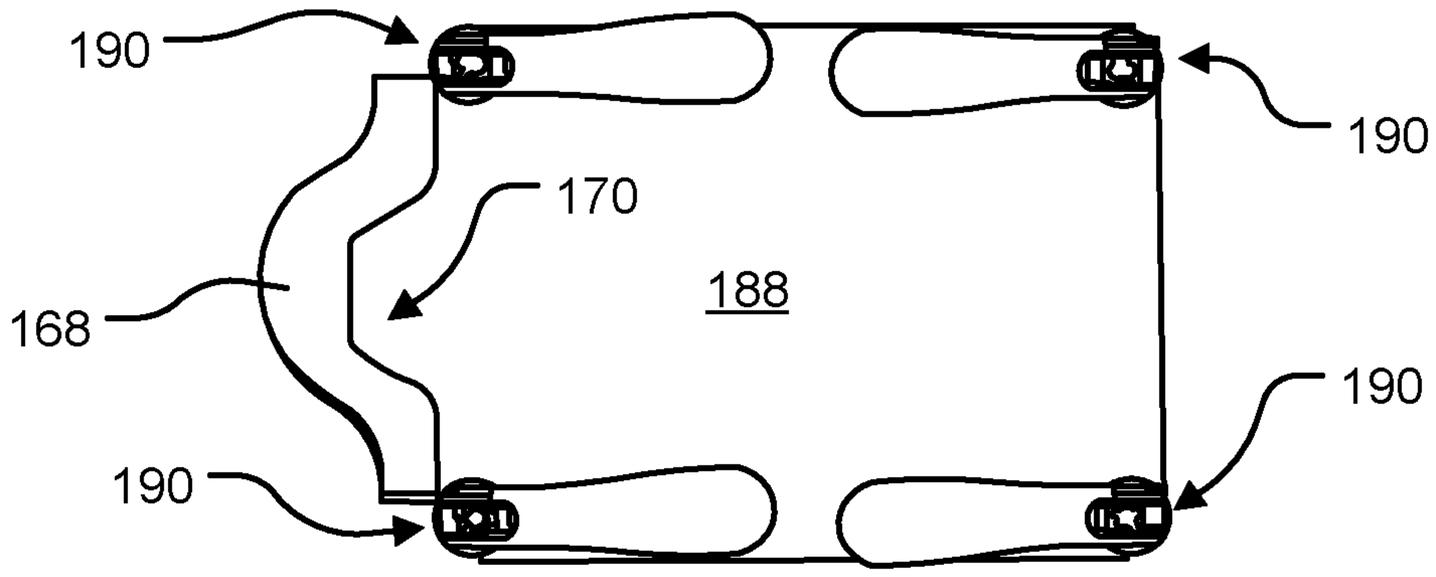

FIG. 8A

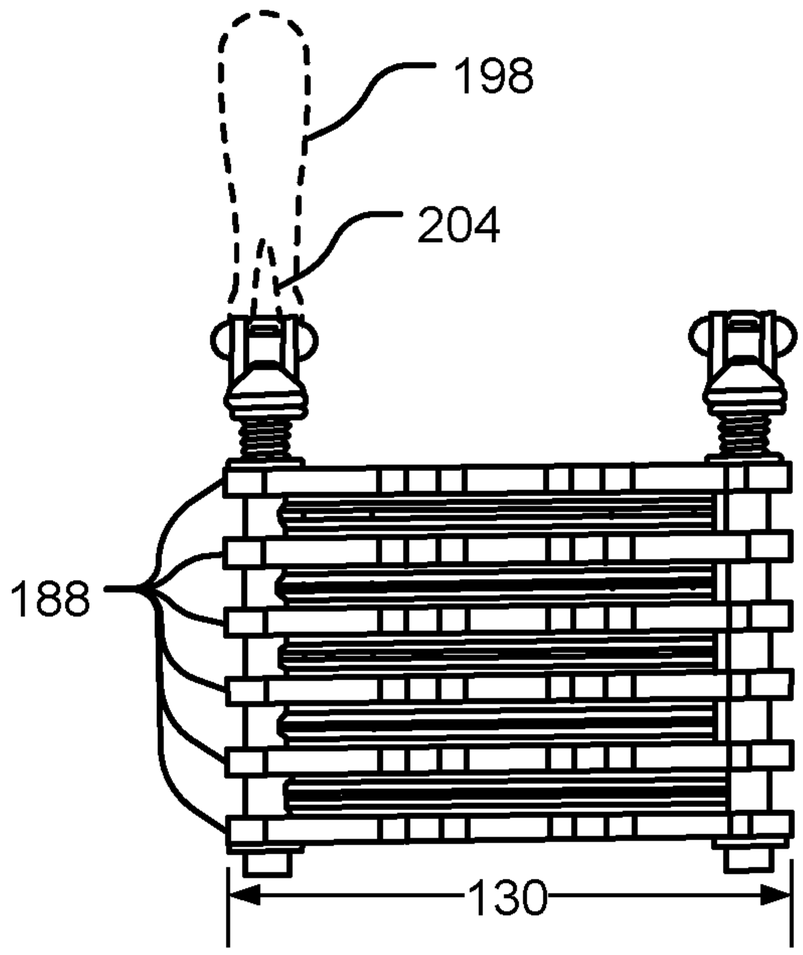

FIG. 8B

FIG. 8C

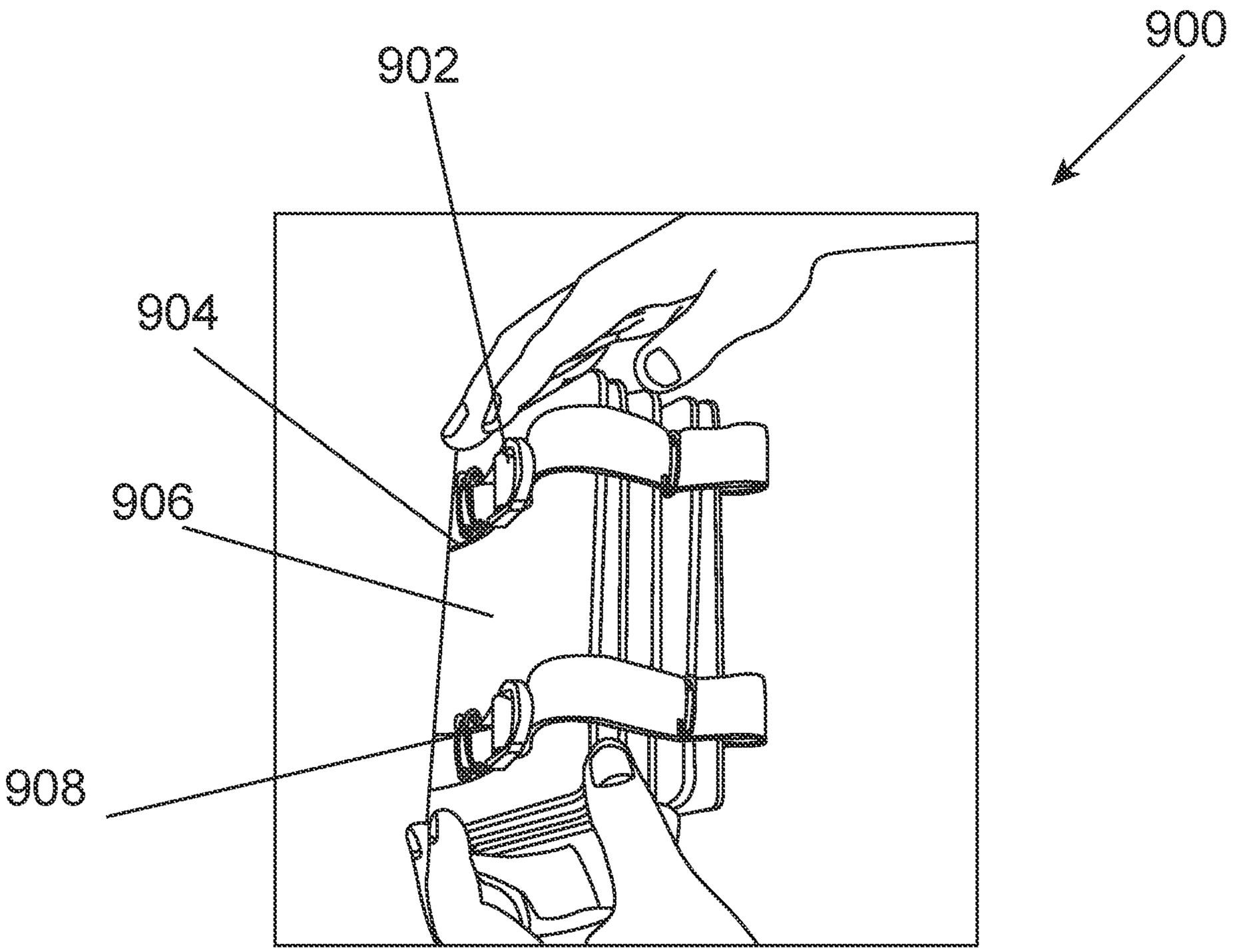

Figure 9

CONTAINER ASSEMBLY, SUPPORT STRUCTURE AND METHODS

TECHNICAL FIELD

The present invention relates to a container assembly, freezer container support structure and methods relating to the selective access and storage of freezable liquids. The present invention relates, in particular, to the use of such assemblies, structures and methods in the storage and use of breast milk.

BACKGROUND

Currently, freezable liquids such as breast milk are typically stored in plastic bags or glass bottles. The bags are expensive, prone to leakage, usually single-use and thus result in a significant amount of liquid and plastic waste.

Glass bottles are also sometimes used for the purpose of containing liquids for freezing. However, glass bottles are an even more expensive, bulky, hard to organise in a freezer compartment (e.g. the freezer compartment of a domestic refrigerator) and can fracture upon expansion of the liquid during freezing.

During use, bottles can be overlooked resulting in newer breastmilk being used in advance of breastmilk that has been frozen for longer. This results in some breastmilk going bad as it passes its useful shelf-life.

A reusable alternative to bottles is an ice cube tray. Ice cube trays typically occupy considerably more volume than the volume of liquid intended to be frozen in the trays. To conserve space, frozen cubes are transferred to bags. However, once in bags the milk is highly susceptible to freezer burn, rendering the milk unusable.

On a survey of women who use some current methods of freezing breastmilk:

(a) 38% think the freezing and usage process a waste of plastic;

(b) 16% think the ice cube trays, jars or bags take up too much freezer space; and

(c) 40% think the current freezing and usage process results in too much spillage or leakage.

It is generally desirable to overcome or ameliorate one or more of the above described difficulties, or to at least provide a useful alternative.

SUMMARY

In accordance with the present disclosure, there is provided a container assembly for containing freezable liquid, the container assembly comprising:

a V-shaped container having a V-shaped cross-section and being formed from freezer-safe material; and

a support base being shaped to receive and cooperate with the container thereby to support the container during filling with freezable liquid.

The support base may be shaped to receive and cooperate with the container, by having a V-shaped groove sized and shaped to receive the V-shaped container.

The support base may be formed from freezer-safe material and is adapted to be disposed in a freezer, with the container received in the V-shaped groove, during freezing of freezable liquid contained in the container.

The container may comprise:

a body having the V-shaped cross-section; and

a lid adapted to form a liquid-tight seal with the body when in a closed condition.

The lid may be attached to the body by a hinge. The lid may comprise one or more protrusions for gripping when manually moving the lid to an open condition. The lid may comprise a depressed surface surrounded by a peripheral, raised lip, the lip being adapted to engage the body of the container. The depressed surface may be adapted to receive a label, below the lip.

The body may comprise a raised rim adapted to engage the lid to form a liquid-tight seal with the lid.

The support base may comprise one or more laterally extending fins for increasing an external surface area of the support base.

The container may comprise one or more indicia corresponding with one or more corresponding indicia positionable on an outside of a freezer compartment, thereby to identify freezable liquid contained in the container without opening the freezer compartment. The indicia may comprise a colour of the container. The lid may be coloured so as to correspond with one or more corresponding indicia positionable on an outside of a freezer compartment, thereby to identify freezable liquid contained in the container without opening the freezer compartment. Thus the colour of the lid constitutes one index of the one or more indicia.

The support base may have a groove shaped to receive and cooperate with the V-shaped container. The container, when received in the groove (which may be V-shaped), may be slidable longitudinally along the groove thereby to enable the container to be removed from the support base.

The present disclosure further provides a freezer container support structure comprising:

two or more plates; and

at least two spaced support members,

wherein the support members are adapted to engage the plates in spaced locations along the support members, to maintain one or more freezer containers between the plates during freezing of a freezable liquid contained in each said freezer container.

Each plate of the two or more plates may comprise a raised peripheral lip.

The support members may each comprise a strap for fitting around the two or more plates, thereby to maintain the two or more plates in register. The term "in register" is intended to include within its meaning that the plates are aligned—e.g. parallel and overlapping—or otherwise in a configuration to maintain the freezer containers therebetween.

The plates may have a substantially quadrilateral shape, the support structure comprising four said support members extending between the plates at or near respective corners of the plates.

The support members may each comprise one or more movable bearing members, the plates contacting the bearing members such that the bearing members maintain the plates in spaced relation. Each support member may be extendable so as to contact an upper internal surface and a lower internal surface of the freezer compartment, thereby to maintain the freezer container support structure in fixed position in the freezer compartment.

The plates may be movable with respect to the support members, such that plates can be added or removed from the freezer compartment to respectively increase or decrease space available for supporting freezer containers.

The present disclosure also provides a method for selectively accessing freezable liquid stored in a freezer compartment, the method comprising:

identifying, on an outside of the freezer compartment, one or more corresponding indicia corresponding to one or both of:

a storage period of freezable liquid stored in one or more freezer containers; and

a selected volume of freezable liquid stored in the one or more freezer containers;

locating the one or more freezer containers inside the freezer compartment by locating one or more indicia inside the freezer compartment, the one or more indicia:

identifying the one or more freezer containers; and

corresponding to the one or more corresponding indicia located on the outside of the freezer compartment; and

removing the one or more freezer containers from the freezer compartment.

The method may further comprise removing the one or more corresponding indicia.

Locating the one or more freezer containers may comprise locating the one or more freezer containers on a plate of a freezer container support structure as described above, the method then further comprising removing said plate from the freezer container support structure.

The present disclosure still further provides a method for storing freezable liquid for future selective access, comprising:

dispensing freezable liquid into one or more freezer containers;

associating the one or more freezer containers with:

one or more indicia locatable in a freezer compartment, the one or more indicia:

identifying the one or more freezer containers; and

corresponding to one or more corresponding indicia located on the outside of the freezer compartment;

wherein the one or more corresponding indicia identify one or both of:

a storage period of freezable liquid stored in one or more freezer containers; and

a selected volume of freezable liquid stored in the one or more freezer containers;

positioning the one or more freezer containers in the freezer compartment; and

sealing the freezer compartment.

When the term "for" is used in relation to the present container assembly, freezer container support structure and method for containing/storing freezable liquid, that term will be understood to mean "suitable for but not limited to". The freezable liquid may be breast milk, but insofar as being 'suitable for but not limited to' use with freezable liquid, the present container assembly, support structure and method may also be used with food stuff (e.g. minced meat, crushed fruits and/or vegetables, frozen meals (solid or liquid) and the like).

Positioning the one or more freezer containers in the freezer compartment may comprise positioning the one or more freezer containers on a plate of a freezer container support structure as described above, the method further comprising adding a further plate to the freezer container support structure in spaced relation to said two or more plates of the freezer container support structure.

The present container may be formed from silicon.

Embodiments of the present invention may enable reuse of freezer containers and/or may provide an indication of which freezable liquid, stored in freezer containers in a freezer compartment, should be first used and the volume of freezable liquid in each said container and the volume remaining in the freezer compartment.

BRIEF DESCRIPTION OF THE DRAWINGS

Preferred embodiments of the invention are hereafter described, by way of non-limiting example only, with reference to the accompanying drawings, in which:

FIGS. **1***a*, **1***c* and **1***d* show top perspective, top and side views respectively, of a freezer container in accordance with present teachings, in an open condition;

FIG. **1***b* shows a top perspective view of a freezer container in accordance with present teachings, in a closed condition;

FIG. **2** shows the freezer container of FIG. **1***b* in position for receipt in a support base in accordance with present teachings;

FIG. **3** shows the freezer container of FIG. **1***b* in position in the support base;

FIGS. **4** and **6** show a set of fridge magnets bearing corresponding indicia, the corresponding indicia corresponding to indicia associated with one or more freezer contains located inside a freezer compartment;

FIG. **5** is a photo of a plurality of freezer containers, each comprising a bag, and indicia, located in a tray in a freezer compartment;

FIG. **7** is an illustration of a freezer container support structure in accordance with present teachings; and

FIG. **8** is an illustration of an alternative embodiment of a freezer container support structure in accordance with present teachings.

FIG. **9** is a photo of another embodiment of a freezer container support structure.

DETAILED DESCRIPTION OF PREFERRED EMBODIMENTS

Embodiments of the present invention enable the storage and use of freezable liquids in a selective and organised manner. The freezable liquids can thus be used based on the age of the liquid (e.g. the period of time the liquid has been stored in a freezer compartment) or the volume of liquid in a freezer container.

Unless context dictates otherwise, the term "freezable liquids" and similar terms will be taken include liquids that are liquid at room temperature, but freeze to a solid when left in a freezer compartment—e.g. the freezer compartment of a domestic refrigerator. Thus, the term "freezable liquids" and similar terms will also include within their scope such liquids when frozen (i.e. frozen solid).

The present discussion will generally refer to the use of the present apparatuses and methods with human breastmilk. However, it may be possible to use the present apparatuses and methods with other freezable liquids.

FIGS. **2** and **3** illustrate a container assembly **100** for containing freezable liquid. The container assembly **100** includes a V-shaped container **102** and a support base **104**. The container assembly **100** enables breastmilk (or other freezable liquid) to be stored in freezer containers, such as container **102**, and is adapted to be located in a freezer during freezing of the freezable liquid.

The freezer container **102** and support base **104** are shaped to cooperate such that the support base **104** receives and supports the container **102** during filling of the container **102** with freezable liquid. Presently, the container **102** has a V-shaped cross-section (e.g. taken through plane **106**) and

the support base **104** has a V-shaped groove sized to receive the container **102**, though other cross-sections (e.g. rectangular) may be used in some cases. An outer surface **108** of the container **102** is therefore adapted to cooperate or conform to an inner surface **110** of the support base **104**.

The V-shaped groove defined by surface **110** is open at at least one end, and presently at both ends. This enables the container **102**, when received in the V-shaped groove **110**, to slide longitudinally (i.e. in a direction perpendicular to the V-shaped cross-section, or plane **106**) along the V-shaped groove **110**. Thus the container **102** can be removed from the support base **104** without having to lift the container by its lid **112**.

FIG. **2** shows the container **102** in a position for receipt in support base **104**, in the direction of arrow X. FIG. **3** shows the container **102**, when received in the support base **104**. As mentioned above, the container **102** comprises a lid **112**. The container **102** further comprises a body **114** and the lid **112** forms a liquid-tight seal with the body **114** when in a closed condition as shown in FIGS. **2** and **3**.

The body **114** comprises the surface **108** that defines the V-shaped cross-section, and also comprises a raised rim **116**. The raised rim **116** projects outwardly from the surface **108** such that it rests on an upper surface **118** of the support base **104** when the container **102** is received therein. The raised rim **116** therefore supports the container **102** on the support base **104** during filling of the container **102** with breastmilk. In addition, the rim **116** projects over the interface between surface **108** and surface **110**. The rim **116** therefore reduces the likelihood of breastmilk seeping in between the container **102** and support base **104**, which may otherwise attach the container **102** to the support base **104** if the container **102** remains in the support base **104** during freezing of the breastmilk.

The support base **104** includes the internal surface **110** as described with reference to FIG. **2** (i.e. the surface shaped to conform to the V-shaped cross-section of the container **102**, or the container **102** as a whole). In addition, the support base **104** includes an external surface **120**, being that which is not adapted to contact the container **102** during filling of the container **102**.

While the external surface **120** may take any desired shape, the present external surface **120** comprises a plurality of laterally extending fins **122**. The fins **122** project in equal number, in opposite directions, of the support base **104**. The fins **122** extend parallel to a longitudinal direction of the container **102**, namely perpendicular to the V-shaped cross-section thereof.

The fins **122** are intended to increase the surface area of the support base **104** to facilitate more rapid cooling. Heat from the breastmilk in the container **102** transfers to the container **102**, and from the container **102** into the support base **104**. The support base **104** then transfers that heat into the environment in the freezer compartment during freezing of the breastmilk. Having increased surface area through which heat can be transferred may thus increase the rate of cooling.

It will be understood that no fins, one fin or any other number of fins may be provided, as desired.

The container **102** and support base **104** are formed from freezer-safe material (i.e. material that does not degrade or otherwise perish in a freezer compartment). The container **102** and base **104** may, for example, be formed from silicon. The base **104** may instead be formed from metal. Thus the support base **104** is adapted to be disposed in a freezer compartment, with the container **102** received in the V-shaped groove defined by surface **110**, during freezing of freezable liquid contained in the container **102**.

Now referring to FIGS. **1***a* to **1***d*. The lid **112** of the container **102** is attached to the body **114** by a hinge **124**, although any other connection system may be used or connection between the two may simply be achieved on the lid **112** being press-fit or friction-fit onto the body **114**. The hinge **124** may be a living hinge (e.g. integral with the lid **112** and body **114** and formed by a thinning of material such that bending preferentially occurs through that material instead of the lid **112** or body **114**) or any other suitable hinge mechanism.

The lid **112** comprises one or more protrusions **128** for gripping when manually moving the lid **112** to an open condition. The protrusions **128** are presently formed as a pair of semicircular extensions of a raised lip **130** that extends around a periphery of the lid **112**. Any other form of grip may be used as appropriate.

The present lip **130** includes an extension **134** and a flange **136**. The flange **136** seats on top of the body **114** when the lid **112** is pushed into a closed condition against the body **114**. The lid **112** further comprises a depressed surface **132** surrounded by the peripheral, raised lip **130**. The extension **134** of the lip **130** extends between the depressed surface **132** and the flange **136**.

The lip **130** is adapted to engage the body **114** of the container **102** when the container **112** is in a closed condition. Engagement may simply comprise the provision of a friction fit between the lid **112** and body **114**—for example, the extension **134** may be slightly larger than an internal surface **138** of the body **114**, e.g. an internal surface **138** of the rim **116**, such that friction maintains the lid **112** in position on the body **114**. Instead, the present lip **112** comprises a sealing ring **126**. The sealing ring **126** extends around the outside of the extension **134** and seals against the body **114** in an understood manner. Thus the raised rim **116** of the body **114** facilitates formation of a liquid-tight seal with the body **112**.

The container assembly **100** operates with a related series of indicia. The indicia enable a user to identify which freezer container **102** to use—e.g. based on age of breastmilk and/or volume in the respective container—from a plurality of freezer containers contained in a freezer compartment, without having to open the freezer compartment. To this end, the container **102** comprises one or more indicia corresponding with one or more corresponding indicia positionable on an outside of the freezer compartment (see reference **140** in FIGS. **4** and **6**). The outside may comprise the door of a freezer, a bench beside the freezer or elsewhere.

FIGS. **4** and **6** show examples of indicia. The indicia **142** comprise a colour code. The colour code **144**, shown in relation to indicia **142**, correspond to a colour code associated with one or more containers, such as containers **102**, located in the freezer compartment. In some embodiments, the colour code may correspond to a colour of the container itself—e.g. the container may be made of silicon dyed red, and corresponding to a red-coloured label on the outside of the freezer compartment.

Rather than colouring the entire container, the lid, such as lid **112**, may be coloured so as to correspond with one or more corresponding coloured indicia on the outside of a freezer compartment. Thus a user may identify freezable liquid contained in the container without opening the freezer compartment.

The indicia may instead employ pairs of characters—e.g. numbers, letters, symbols or other visual device—with one in each pair being located on the outside of the freezer

compartment, and the other one in each pair being located inside the freezer compartment in association with the corresponding one or more containers.

Notably, the indicia shown in FIGS. **4** and **6** are provided on a series of fridge magnets **154**. Each magnet **154** provides a colour code that may correspond to a coloured tag attached to a container in the freezer compartment—such as coloured tags **146** in FIG. **5**. Each magnet **154** also provides a number **148** which may correspond with a number provided on each relevant container, or the containers may be located on trays, discussed with reference to FIG. **7**, on which the numbers are located. Each magnet **154** further lists a volume **149** of breastmilk in each container, and a date **150** on which that breastmilk was expressed and put into the container. The volume and date written on each fridge magnet **154** could be written in dry erase solution so that the indicia wipe easily from the magnet **154** once the corresponding one or more containers have been used.

In some embodiments, the depressed surface **132** is adapted to receive a label, below the lip **130**. In this context, the phrase "below the lip" is intended to mean below the flange **136** of the lip **130** so that a label displaying indicia can be positioned on the depressed surface **132** and will be readily visible while the surrounding lip **130** protects the label from coming into contact with other objects in the freezer compartment. Thus the label may remain readable for longer than if it were not protected.

By using a V-shaped container **102** rather than, for example, a cube or box shape, results in fewer edges between planar surfaces of the body **114**. Having fewer edges potentially results in fewer sites where bubbles can be trapped which may otherwise contaminate breastmilk in the container **102**. In addition, when inserting and removing the container **102** parallel to the direction of arrow X, there are no side of the container **102** that are parallel to that direction of insertion/removal. Accordingly, there is very little friction when removing a filled container, thus potentially reducing the force required to remove the container and consequentially reducing the risk of spillage of breastmilk.

FIG. **5** shows an alternative container, comprising a bag **152**. A coloured tag **146** is attached to each bag **152**, by a clip or pin. The tags may be attached by any other method, or may be incorporated into the bag **152** itself. Each bag **152** shown in FIG. **5** also comprises a label **158**. The volume of breastmilk in each bag **152** is listed on the respective label **158**. Notably, the breastmilk frozen in the bags **152** has frozen in a substantially flat shape. Normally, if liquid is frozen in a bag it will collect and form a bulge in the base of the bag. Bulging bags are less desirable than flat bags since they occupy more space in a freezer compartment and take longer to freeze and defrost or thaw, due to lower surface area per unit volume when compared with breastmilk frozen in flat bags.

In an alternative liquid storage scenario, a freezer container support structure **160** is provided, as shown in FIG. **7**. The freezer container support structure **160** comprises two or more, and presently three, plates **162**. The freezer container support structure **160** also includes at least two spaced support members **164***a*, **164***b*. The support members **164***a*, **164***b* are adapted to engage the plates **162** in spaced locations along the support members **164***a*, **164***b*, to maintain one or more freezer containers between the plates during freezing of a freezable liquid contained in each said freezer container. The spaced locations may be discrete locations along the support members **164***a*, **164***b*, or may be locations in a continuous range of possible locations along the support members **164***a*, **164***b*.

In some embodiments, particularly that as shown in FIG. **7** in which the support members are rigid, the plates **162** may be maintained in spaced relation, parallel to a surface **166** of a freezer compartment when the support structure **160** is positioned in the freezer compartment. This ensures freezer containers, such as bags, positioned on respective ones of the plates **162** do not slide off while in the freezer compartment. Each of the plates **162** is adapted to support one or more freezer containers **168** during freezing of a freezable liquid contained in each said freezer container **168**.

For illustration purposes only, the structure **160** is shown with a single support member **164***a* at one end, and two support members **164***b* at the opposite end. In practice, the number of support members at either end will likely be the same. Presently, the plates **162** are each substantially quadrilateral in shape, particularly rectangular, and the support structure **160** would thus typically include four support members, each extending between the plates **162** at respective corners of the plates. In this sense, "substantially quadrilateral" means having four generally straight sides. However, this terminology is intended to include within its scope embodiments where the corners are rounded, a peripheral lip or rim projects out of plane with the main body of the plate **162** and so forth.

Each support member **164***a*, **164***b* comprises one or more movable bearing members, presently embodied by seats **170**. The plates **162** contact the bearing members such that the bearing members maintain the plates **162** in spaced relation in the freezer compartment. As particularly shown with respect to the single support member **164***a*, the bearing members comprise seats **170** on which the plates rest in an understood manner. Each seat **170** may be a nut or any other device for movable attachment to the support member **164***a*, so as to be capable of accommodating freezer containers **168** of different volume or thickness. Presently, the seats **170** are nuts with an internal screw thread that engages a corresponding screw thread on a shaft **172** of the respective support member **164***a*. The same arrangement applies with support members **164***b*.

In other embodiments, a further bearing member **180** such as a nut may be moved down the shaft **172** on top of each plate (except the bottom plate) to press the respective plate down upon the freezer containers **168** on the plate immediately below. This may assist in ensuring the freezer containers **168** freeze flat and take up minimal room. In further embodiments, only the further bearing member is provided.

Support member **164***b* comprise a shaft **182** and upper foot **184**. The upper foot **184** includes an internal thread in the same manner as a nut, and is rotatable about the shaft **182** to raised or lower the upper foot **184** on the shaft **182**. Thus, the support members **164***b* are extendable so as to contact an upper internal surface and a lower internal surface (by lower foot **186**—on which the lowermost plate **162** may rest in use) of the freezer compartment. This assists with maintaining the freezer container support structure **160** in fixed position in the freezer compartment in the event that it is knocked while other items are being inserted into or removed from the freezer compartment or the support structure **160** itself.

The top plate **174** comprises a raised peripheral lip **176**. Such a lip **176** may be provided on all plates. The lip **176** prevents the freezer containers **168** from sliding off the plates **162** while in the freezer compartment. The lip **176** may extend the entire way around the periphery of the relevant plate(s), or may extend around the full periphery of some plates and not others. The lip **176** may extend around three of four sides of each plate **162**, so as to leave one side

free from obstruction for insertion of a freezer container onto that plate and subsequent removal of that container. Also, each plate **162** may be designed to carry multiple freezer containers, side-by-side across the plate and/or stacked atop one another on the plate, or only a single freezer container, depending on the size of the plates and the volumes of the containers.

By providing seats **170** and/or bearing members **180**, the plates are movable with respect to the support members **164***a*, **164***b*. Thus plates **162** can be added or removed from the freezer compartment to respectively increase or decrease space available in the support structure **160** for supporting freezer containers **168**. In this sense, while freezer containers **168** can be stacked directly atop neighbouring freezer containers **168**, the stack may become unstable. The addition of further plates **162** on the support members **164***a*, **164***b* provides additional metal surfaces onto which further freezer containers **168** may be placed for freezing, without destabilising the any other freezer containers **168** already in the support structure **160**.

Another embodiment of a freezer container support structure **900** is shown in FIG. **9**, in which straps **902** are inserted into notches **904** in the plates **906**. Freezer container(s) (e.g. bags) are positioned between the plates **906** and the straps **902** are then inserted into the notches **904**. The straps **902** are tightened to reduce the size of the loop extending from and return to buckles **908**. This holds the freezer container(s) between the plates **906**. The straps **902** may be elasticised to assist with removal of the straps **902** when it is desired that a freezer container be accessed, and to reduce load concentrations on the freezer containers. In the elasticized case, the straps may or may not require a buckle. Given each strap **902** in the present embodiment forms a loop around the plates **906**, the straps **902** each provide two support members, being those portions of each strap extending between the plates **906**.

Using the apparatuses of FIGS. **1** to **7**, methods may be employed for selectively accessing freezable liquid stored in a freezer compartment. Such a method would include identifying, on an outside (i.e. external side in the ambient environment around the freezer compartment, as opposed to an inside of the freezer compartment that defines the chilled volume of the freezer compartment) of the freezer compartment, one or more corresponding indicia. As mentioned above, the indicia associated with freezer containers inside the freezer compartment—such as colours, symbols etc—correspond with corresponding indicia on the outside of the freezer compartment so that a user may know which container to remove from the freezer compartment, without having to open the freezer compartment. Notably, the indicia being located on an outside of the freezer compartment may comprise physically being located on an external surface of the freezer compartment, but may also include being located elsewhere outside the freezer compartment, such as on a bench near the freezer compartment.

The corresponding indicia indicate one or both of a storage period of freezable liquid stored in one or more freezer containers associated with the relevant indicia within the freezer compartment, and a selected volume of freezable liquid stored in the one or more freezer containers. Notably, the storage period may not be identified in terms of days, weeks etc, but may instead be identified in terms of first in or oldest to youngest. This can be achieved by moving fridge magnets into a list ordered by age of breastmilk.

In addition, the selected volume may be an actual volume (e.g. 100 mL, **2** fluid ounces etc) or may be relative (e.g. a single feed, one third of a single feed, etc).

After identifying the desired corresponding indicia, the method comprises locating the relevant one or more freezer containers inside the freezer compartment. This is done by locating one or more indicia inside the freezer compartment, where the one or more indicia both identify the one or more freezer containers, and correspond to the one or more corresponding indicia located on the outside of the freezer compartment. With regard to the embodiment shown in FIG. **7**, this may involve locating the one or more freezer containers on a plate **162** of a freezer container support structure **160**. Moreover, if the freezer container is the last on that plate of the freezer container support structure or, in total, there is sufficient spare room in the freezer container support structure to remove a plate **162**, then the method may involve removing that plate so as to reduce the volume occupied by the freezer container support structure, or to make some freezer containers more easily accessible in the freezer container support structure.

Once the relevant one or more containers have been located, the one or more freezer containers are removed from the freezer compartment. If the freezer containers or indicia are reused, the one or more corresponding indicia should be removed—e.g. erased from the fridge magnets—after the relevant one or more containers are removed from the freezer compartment. This will reduce the likelihood of errors once the containers and/or indicia are reused with new breastmilk.

Similarly, to store freezable liquid for future selective access requires dispensing freezable liquid into one or more freezer containers. Dispensing may involve pumping breastmilk into a receptacle and pouring the pumped breastmilk from the receptacle into one or more freezer containers, or directly pumping into the one or more freezer containers.

After the one or more containers are filled to the desired level, they are associated with one or more indicia locatable in a freezer compartment. The indicia, as mentioned above, may comprise colour coding of the containers themselves, or the attachment of labels or tags to the containers. The one or more indicia thereby identify the one or more freezer containers and also correspond to one or more corresponding indicia located on the outside of the freezer compartment. The corresponding indicia may be colour codes and/or written indicia as discussed with reference to FIGS. **4** and **6**. The one or more corresponding indicia thus identify to a user, without having to open the freezer compartment, a storage period of freezable liquid stored in the one or more freezer containers and/or a selected volume of freezable liquid stored in the one or more freezer containers.

The one or more freezer containers are then positioned in the freezer compartment and the freezer compartment is sealed to commence freezing the freezable liquid. With regard to the support structure **160** of FIG. **7**, positioning the one or more freezer containers in the freezer compartment may involve positioning the one or more freezer containers on a plate of the freezer container support structure **160**. When desired, a further plate **162** may be added to the freezer container support structure **160** in spaced relation to the plates already located in the freezer container support structure. Thus, the capacity of the freezer container support structure can be increased to facilitate addition of further freezer containers into the freezer compartment. The plate may also, or alternatively, bear down on the unfrozen contents of freezer containers on the plate immediately below, thereby assisting with ensure the freezable liquid freezes relatively flat and thus occupies little room in the freezer.

An alternative support structure **186** is shown in FIG. **8**, comprising FIGS. **8**A, **8**B and **8**C. FIG. **8**A shown a top view of the structure **186**. A generally rectangular plate **188** is provided, with a lip **190** for grasping the plate **188**. FIG. **8** shows a stack of such plates **188** sized to generally conform with the peripheral dimensions of a single freezer container or freezer bag **168** of predetermined shape and/or volume.

While generally conforming to the size and shape of a predetermined freezer container **168**, to facilitate easy withdrawal of a freezer container **168** from the support structure **186** the plates **188** are slightly smaller than the freezer containers **168** in at least one dimension. Thus, as shown in FIGS. **8**A and **8**C, the freezer containers **168** overhang the plates **188** and can thus be grasped from, for example, the middle of the stack of plates **188** without undue difficulty.

Instead of telescopic support members **164***a*, **164***b*, the support structure **186** comprises sprung, quick release tension supports **190**. Each sprung support **190** comprises a skewer **192**, which is an elongate threaded shaft, a bearer plate **194** and a release plate **196** separated by a spring **197**, and a release handle **198**. In use, the handle **198** (at this stage angled upwardly as shown in broken lines in FIG. **8**B) is rotated, with the release plate **196** until the bearer plate **194** bears against the top plate **189** and the spring **197** thus experiences a small amount of compression. The handle **198** is then rotated about pin **200** to place further compression on the release plate **196**, through the spring **197** onto the bearer plate **194** and thus onto the top plate **189**.

The handle **198** achieves compression as it has non-uniform thickness around the eye of the handle **198** surrounding the pin **200**. Thus, in the release condition shown in FIG. **8**B, a thin portion of the eye is between the pin **200** and release plate **196**. Conversely, when the handle **198** is in the compression condition shown in FIG. **8**C, a thicker portion of the eye is between the pin **200** and release plate **196**. Since the handle **198** is in fixed position on the skewer **192**, as a result of the mating screw thread in the mount **202** to which the handle **198** is attached, the release plate **196** is pushed downwardly. This increases compression in the spring **197** and therefore the downward force applied to the bearer plate **194**.

Since top plate **189** presses against the stack of plates **188** and freezer containers **168** thereby ensuring the freezer containers **168** freeze flat and remain held within the structure **186**. When removing a freezer container **168** from the stack, rather than needing to take the time to unscrew the release plate **196**, the quick release handle **198** can be moved to its release condition as shown in FIG. **8**B. Since the contents of the freezer containers **168** will be frozen solid at this stage, release of the handle **198** will release much or all of the compression. A freezer container **168** can then be selected and removed from the support structure **186**.

The handle **198** include a slot **204**. This slot **204** enables the skewer **192** to pass through the handle when the handle is applying compression to smaller stacks plates **188**.

Many modifications will be apparent to those skilled in the art without departing from the scope of the present invention

Throughout this specification, unless the context requires otherwise, the word "comprise", and variations such as "comprises" and "comprising", will be understood to imply the inclusion of a stated integer or step or group of integers or steps but not the exclusion of any other integer or step or group of integers or steps.

The reference to any prior art in this specification is not, and should not be taken as, an acknowledgment or any form of suggestion that the prior art forms part of the common general knowledge.

The invention claimed is:

1. A freezer container support structure comprising:
two or more plates; and
straps that fit around the plates in spaced locations to compress one or more freezer containers between the plates during freezing of a freezable liquid contained in each of the freezer containers.

2. The freezer container support structure according to claim **1**, wherein each of the plates comprises a raised peripheral lip.

3. The freezer container support structure according to claim **1**, wherein the straps maintain the plates in register.

4. The freezer container support structure according to claim **1**, wherein the plates are movable with respect to the straps.

5. The freezer container support structure according to claim **1**, wherein the plates each include notches that seat the straps to the plates.

6. The freezer container support structure according to claim **1**, wherein the straps each include a buckle, the buckles permitting selective resizing of the straps to compress the freezer containers between the plates.

7. The freezer container support structure according to claim **1**, wherein the straps are elasticized.

8. The freezer container support structure according to claim **1**, wherein the plates each have a substantially quadrilateral shape.

9. The freezer container support structure according to claim **1**, wherein a number of plates and freezer containers within the support structure is adjustable.

10. A method for storing freezable liquid for future selective access, comprising:
dispensing freezable liquid into one or more freezer containers;
positioning the freezer containers between two or more plates;
fitting straps around the plates in a spaced orientation;
compressing the freezer containers between the plates using the straps;
positioning the freezer containers in a freezer compartment; and
sealing the freezer compartment.

11. The method of claim **10**, wherein each of the plates comprises a raised peripheral lip.

12. The method of claim **10**, wherein the straps maintain the plates in register.

13. The method of claim **10**, wherein the plates are movable with respect to the straps.

14. The method of claim **10**, wherein the plates each include notches that seat the straps to the plates.

15. The method of claim **10**, wherein the straps each include a buckle, the buckles permitting selective resizing of the straps to compress the freezer containers between the plates.

16. The method of claim **10**, wherein the straps are elasticized.

17. The method of claim **10**, wherein the plates each have a substantially quadrilateral shape.

18. The method of claim **10**, wherein a number of plates and freezer containers is adjustable.

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